

Just sit still and pay attention? The importance of physical activity in schools

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## **Abstract**

The majority of young people spend a large proportion of their time at school, yet many of them do not have adequate opportunities to obtain the recommended amount of moderate to vigorous physical activity (MVPA). The public health crisis associated with physical inactivity has an influence on children's physical and mental health. Achieving adequate amounts of physical activity can raise students' test scores and enhance their ability to focus. Given the benefits for health and well-being, it seems inconceivable that schools would contribute to depriving students of opportunities to be active by limiting physical education and withholding recess. If decision makers or policy makers use evidence to inform both policies and practices that promote and require physical activity opportunities in schools, then students will develop healthy habits that will ultimately reduce the prevalence of chronic disease, enhance academic success, and positively contribute to overall well-being.

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## **Preface**

Physical activity is one of many factors that influence the growth and development of children. Currently, only about 24% of children aged 6 to 17 years participate in the recommended 60 minutes of moderate-to-vigorous physical activity daily (National Physical Activity Plan Alliance [NPAPA], 2018). Extensive scientific evidence demonstrates that regular physical activity in youth has numerous benefits for physical, mental, and cognitive health (Institute of Medicine, 2013). Insufficient physical activity can be detrimental to the overall health of young people (Dubroc, 2007). This partially stems from low energy expenditure that promotes a positive energy balance, resulting in an increased risk of obesity, type 2 diabetes, hypertension, and other chronic diseases (Hills, King, & Armstrong, 2007).

## Chapter 1 - Public Health Crisis

Type II diabetes, obesity, atherogenesis and hypertension were once diagnoses only prevalent in adults, but are now becoming common, life-altering diseases in children (Weiss, Bremer, & Lustig, 2013). Healthy habits are developed in childhood and carried into adulthood, so it is crucially important to develop healthy physical activity habits at an early age (Franks et al., 2007). Longitudinal data have shown that for every weekday adolescents participate in physical education, the odds of becoming an overweight adult decrease by 5% (Menschik, Ahmed, Alexander, & Blum, 2008). If children are not educated in the context of healthy social norms, to develop the physical and self-management skills and motivation for physical activity from an early age, it could be very challenging for them to adopt such healthy behaviors as adults.

In the United States, the percentage of children with obesity has more than tripled since the 1970s (Center for Disease Control [CDC], 2018a); currently about one in every five children between the ages of six and 19 years old is obese (CDC, 2018a). Approximately 85% of children with obesity will grow up to become adults with obesity (Weiss et al., 2013), putting them at greater risk for type 2 diabetes, certain cancers, heart disease, stroke, and other chronic diseases (Bray & Bellanger, 2006). If not properly controlled, these diseases can significantly decrease quality of life and longevity.

In addition to concerns about obesity, the economic burden of inactive lifestyles is a public health concern. About \$50 billion global health care dollars are spent on diseases that are preventable by proper physical activity (Ding et al., 2016). The financial impact is too costly to ignore. In the U.S. alone, chronic diseases associated with obesity account for 70% of health costs (Levine, 2011).

A large portion of research on physical activity in children relates to the influence it has on weight; however, it is important to note that the positive influence of physical activity stretches far beyond a number on the scale. There are multiple health conditions or behaviors that physical activity may help to ameliorate, such as stress, sleep disorders, dietary intake, anxiety, depression, blood sugar control, and overall well-being (U.S. Department of Health and Human Services [HHS], 2008). It is vital that children participate in a variety of different types of moderate to vigorous activity (MVPA) that incorporate bone strengthening and aerobics to achieve the recommended 60 minutes or more of physical activity daily (HHS, 2012). If appropriate policies to encourage physical activity are not developed and effectively implemented, the public health crisis will only continue to worsen.

## **Chapter 2 - Physical Activity in Schools**

Since children spend most of their waking hours within classroom walls, schools are in a unique position to increase the amount of physical activity available to children. About 95% of American children between the ages of five to 17 years old are enrolled in a school, hence there is no other setting that has such reach and degree of influence on young people during their first two decades of life (Story, Nannery & Schwartz, 2009). During the weekdays, students may have the opportunity to obtain physical activity through four main avenues: physical education, classroom activity breaks, before or after school activities, and active transportation (US Department of Health & Human Services, 2012). The American Academy of Pediatrics discourages withholding physical activity opportunities; however, school personnel and policy frequently continue to limit and restrict physical activity opportunities (Murray et al., 2013). In 2006, the CDC found that 81.5% of elementary schools allowed the restriction of recess, purportedly to strengthen academic performance or classroom management (Lee, Burgeson, Fulton, & Spain, 2006). Physical activity limitation and restriction deserves serious scrutiny. Not obtaining adequate amounts of physical activity has the capability to hinder the overall health and academic success of future leaders. Physical activity is an important component of the school day, helping children and adolescents reach their full potential, and it should be regarded and valued as such.

### **Physical Activity Deprivation and Restriction**

Physical activity is engineered out of the daily lives of children through the vast advancements in technology and environment influences. Children spend around five to seven hours a day looking at a technology screen (Strasburger, Jordan, & Donnerstein, 2010). They have nearly uninterrupted access to video games, television, cellular phones, and other devices.

In addition, most students do not walk or ride bikes to school anymore, significantly reducing the amount of active transportation (NPAPA, 2018). In the United States, nearly half of the children aged five to 14 actively travelled to school in 1969, but by 2009, only 13% engaged in active school travel (McDonald, Brown, Marchetti, & Pedroso, 2011). There are multiple individual and environmental influences that account for this shift. Public safety concerns, like violence and traffic, in addition to low economic status, reduce the participation rate of children using active transportation (Davison & Lawson, 2006).

Schools could partner with their local communities to put interventions in place that replace car transportation with walking or biking to school, and promote a safe atmosphere. This could be achieved by additional sidewalks, cross walks, or volunteers to help to facilitate active transportation. It is important to recognize that parental and societal norms are positively associated with active school transportation (Rothman, Macpherson, Ross, & Buliung, 2018). Several decades ago, children would walk home from school and were forced to play outside until their parents got home. It was not uncommon for children to roam the neighborhoods with friends without adult supervision. The percentage of 6 to 12-year-old children who spent time outdoors decreased from approximately 16% in 1997 to 10% in 2003 (Hofferth, 2009). In addition to this, almost 80% of principals reported that their schools continue to take recess away from students as a punishment for bad behavior (NPAPA, 2018). The combination of these components added together do not create a very promising future for the future physical activity of children. Increasing the amount of physical activity children receive in schools could positively contribute to many students' health and wellbeing.

## **Prevalent Challenges**

As mentioned previously, schools do not always contribute positively to giving students opportunities to be active, but instead make them spend more time sedentary in the classroom. However, sometimes schools are not entirely at fault. Federal and state policies that are enacted at schools and within districts can actually make matters worse for students when it comes to having physical activity incorporated into their time at schools.

A lack of funding, safety concerns, teacher burnout, and chronic student absenteeism are just a few of the many difficulties and demands public education is faced with every year. Policy pressures to raise standardized test scores through additional instruction time makes it challenging for schools to find time to promote physical activity (Ramstetter & Murry, 2017). Financial pressures also increase teacher layoffs and decrease resources necessary to provide physical education equipment (Institute of Medicine, 2013). Nevertheless, schools are still responsible for helping students learn how to regulate emotions, make decisions, socialize, develop values, and grow into healthy adults (World Health Organization [WHO], 2003). Schools have an important role in instilling these life skills in children, just like they have a prime opportunity to promote healthy living in students too.

## **Models and Frameworks to Promote Physical Activity**

### **CSPAP**

The CDC (2016) has developed training tools to assist schools in promoting health, despite the adversity educational institutions face. The Comprehensive School Physical Activity Program (CSPAP) is a free resource, developed by the CDC, that helps schools take a multi-component approach to instill the knowledge, skills, and confidence in students to be physically active for a lifetime. This model encourages schools to create or take advantage of opportunities

for students to be physically active. Schools that adopt a CSPAP make it more possible for students to achieve the nationally recommended 60 minutes of MVPA each day (US Department of Health & Human Services, 2012). According to the National Academies of Sciences, Engineering, and Medicine (formerly the Institute of Medicine), students are recommended to get at least 30 minutes of MVPA during the school day (Institute of Medicine, 2013). Unfortunately, physical education classes are only likely to provide 10-20 minutes of MVPA (Institute of Medicine, 2013), leaving a portion of the required 30 minutes to other parts of the school day. The CSPAP encompasses physical activity guidelines that schools can use to implement more opportunities for MVPA during recess and physical education. These programs are designed to enhance children's health and wellbeing for many years to come. Healthy norms taught in school contribute to a positive school environment, which creates a supportive atmosphere and better quality of life (WHO, 2003). Unfortunately, only 3% of schools have established and implemented a CSPAP (National Activity Plan Alliance, 2018). The reason for very few schools adopting a CSPAP needs to be addressed. Additional research is needed to determine whether it is an issue of funding, resources, knowledge, or all of the above, because multiple studies support that CSPAPs positively contribute to school children's health. If schools promote MVPA through age-appropriate activities, students can form an association that physical activity is enjoyable.

## **COM-B**

The COM-B model depicts the complex components involved in understanding behavior (Michie, Atkins, & West, 2014). Capability, opportunity, and motivation (COM) are three essential components that schools should evaluate to change the amount of physical activity children participate in. The COM-B model includes interventions to address deficits in the

essential conditions. This framework helps to identify which conditions need to be improved to achieve the desired behavior of increasing physical activity (Michie et al., 2014). Physical and psychological capability in a school setting does not end at instruction on how to do various types of physical activity. It includes where, when, and reasons to implement the movements into daily life. Physical and social opportunities provide a chance for children and families to move their bodies before, after, and during school. Some examples could be walk-a-thons, organized sports, or special events designed specifically to get families moving. The COM-B incorporates components of reflective and automatic motivation, which means educating students on the benefits of being active, while making fun and meaningful connections. Creating a conducive environment, that is both sensitive and responsive to the way young people learn, is important in successfully changing undesirable behaviors and encouraging children to lead active lifestyles. Schools not only should educate young people on physical activity, but also help them develop the necessary skills to practically apply it throughout their lives.

### **Physical Literacy**

Physical literacy is defined as maximizing individual attributes and the development of the whole child, physically and psychologically, to lead a healthy lifestyle (Castelli, Centeio, Beighle, Carson, & Nicksic, 2014). It is essential to make sure every school-based opportunity to develop physical literacy is taken advantage of with a goal to assist youth in obtaining the necessary competencies needed to be physically active for a lifetime. Physical literacy incorporates many of the initiatives and goals of the CSPAP. It takes into account the influence school curriculum, home environments, and community settings have on developing physical literacy (Castelli et al., 2014). Educators and parents must come together to create a physically literate culture that makes physically active lifestyles a norm. There is no single framework that

has proven to increase physical activity in youth; however, the majority of programs have similar approaches. Taking a comprehensive approach that embraces physical literacy is vital to the development of physically active children (Castelli et al., 2014). In schools, programs that enhance physical literacy can be used to communicate a universal message among education and public health, while improving the quality of life for those involved (Castelli et al., 2014). Learning how and why movement is beneficial helps to establish the purposeful and meaningful connections needed to facilitate the development of skills and capabilities to incorporate physical activity into young students' lives.

## **Chapter 3 - Benefits of Physical Activity**

### **Physical Health Promotion**

#### **Cardiometabolic Markers**

Research has shown that implementation of a CSPAP in schools can significantly improve children's lipid profiles. School-aged children (n=217) were recruited from five low-income elementary schools. The researchers implemented a 36-week CSPAP (Burns, Brusseau, & Hannon, 2017). Cardiometabolic markers were measured before and after the intervention. The data showed an increase in high-density lipoprotein (HDL) levels and a reduction in low-density lipoprotein (LDL) levels. Arterial pressure and triglycerides were also significantly reduced after the intervention. In one school year, CSPAPs are capable of greatly reducing the disease risk in children.

#### **Body Mass Index Reduction**

A randomized controlled trial was used to test whether physical activity could diminish obesity in elementary schools (n=24). Participants were in either 2<sup>nd</sup> or 3<sup>rd</sup> grade and were followed until 4<sup>th</sup> or 5<sup>th</sup> grade. The implementation of this CSPAP required teachers to attend a six-hour in-service training to obtain the education and skills to successfully practice a CSPAP in their classrooms. In the intervention group, the children participated in an additional 90 minutes of MVPA a week to complement the 60 minutes of physical activity they received in physical education class. Participants in the control group had a significantly larger increase in BMI measurements, compared to the participants in the intervention group (Donnelley et al., 2009).

#### **Sedentary Behaviors**

Scientific evidence supports that schools are an important environment for promotion of physical activity in young people. It is imperative that students are active during the school day,

because the research shows they are not going to achieve the recommended amounts on their own at home. Dale, D., Corbin, & Dale, K. (2000) conducted a randomized controlled trial to determine whether children compensated by being more active at home when their school day was sedentary. The results indicated the exact opposite, children who were active at school and participated in outdoor recess along with physical education were far more active when they went home. Children who did not have physical education and were required to have indoor recess, were less active in the evening hours. This could be caused by many different variables, but it is important to recognize restricting physical activity during the day at school has negative effects on students' health. Restricting physical activity during the school day results in students leading a more sedentary lifestyle at home. The students learn a behavior that does not promote leading an active lifestyle, causing negative health consequences for them now and in the future.

### **Mental Health Promotion**

The benefits of physical activity are not limited to physical health (HHS, 2008). When children are given the opportunity to play they develop resilience skills (Moljord, Moksnes, Espnes, Hjemdal, & Eriksen, 2014). They learn to make decisions, develop intrinsic interests, regulate emotions, and solve problems (HHS, 2008). Gray (2010) researched how the decline of free play has influenced children's psychological health. Gray (2010) examined the differences between extrinsic goals and external locus of control and intrinsic goals and internal locus of control in an attempt to understand the reason behind the rise in anxiety and depression in young people. During play, children decide what actions to take when problems arise. They use their imagination to save a city from a monster, or help a friend that is stuck on the monkey bars. The learning and psychological growth of free play contribute to an internal locus of control (Gray, 2010). When children are constantly controlled by adults in a classroom and at home, they are

not able to develop an internal locus of control. As a result, they believe they have little to no control over their fate and develop an external locus of control. People with an external locus of control are less likely to take responsibility for their own health (Gray, 2010). Recess provides a space equally as important as the classroom for children to learn and develop. When taken away, children may feel they have a lack of self-control and are not given the ability to develop important skills necessary for adulthood (Gray, 2010). Many people are aware of the physical health benefits of physical activity offers, but the mental and cognitive benefits are often overlooked.

### **Brain Development, Cognition, and Executive Function**

#### **Academics**

The central nervous system needs physical activity just as much as the musculoskeletal system healthy and effectively operate (Institute of Medicine, 2013). The brain, cardiovascular system, and many processes of the body rely on adequate movement to perform well. In many schools, physical activity opportunities are replaced with additional classroom time (Dubroc, 2007). It can be easily misconstrued that spending additional time on any particular subject will increase students' performances. However, a review of studies concluded that the addition of an hour of physical activity into the school curriculum would not affect the academic achievement of students (Trudeau & Shephard 2008). In contrast, when more classroom time replaces physical activity opportunities the school system may be doing more harm than good (Durbroc, 2007). Physical activity improves the student learning efficacies (Story et al., 2009). It enhances students' abilities to understand, retain, and apply the information they are taught. Several meta-analyses examined the relationship between physical activity and test scores. The results showed significant, positive correlations between activity and performance for language, math, reading,

and in on-task behavior (Álvarez-Bueno et al., 2017). Students' academic performances can be impacted by participation in physical activity, which can continue to influence their lives for many years. Physical activity is positively associated with more college education and overall higher grades throughout the duration of formal schooling (Kari, Pehkonen, Hutri-kÄhÖnen, Raitakari, & Tammelin, 2017).

### **Attention Span**

Young people who are more active have a greater attention span, faster cognitive processing speed, and overall perform higher on standardized academic tests compared to those who are not as active (Institute of Medicine, 2013). Children struggling in school, may not always need additional classroom time; sometimes they need is physical activity (Howie, Beets, & Pate, 2014). Focusing for a 7-hour period with minimal breaks can be challenging for younger students. A randomized controlled study was conducted to evaluate the influence of classroom activity breaks. Time-on-task was significantly higher in students after a 10-minute classroom exercise break compared to a sedentary control group (Howie et al., 2014). Physical activity breaks throughout the school day may improve children's ability to focus on a task in the classroom. Attention deficit disorder (ADD) is becoming more prevalent in school-aged children. The ability for children to stay focused is a process directly related to the outcome of learning. It may help achieve better learning outcomes if students were able to focus better in the classroom.

Health and academic success are intertwined. This inextricable link makes schools the ideal setting to promote physical activity (WHO, 2003). Schools are unable to achieve their mission of quality education if students are not healthy and fit, which is why educational institutions have an unparalleled opportunity to create an environment to promote children's

health through nutritious foods, regular physical activity, and lifelong skills that will aid in living an active lifestyle (Story et al., 2009).

## **Chapter 4 - Policy in Schools**

Nearly all of the published research on the prevalence of physical activity in schools is directly related to the presence of recess and physical education policy, yet many schools do not have physical activity practices in place. The issue stems from a lack of federal and state policies to promote and require physical activity in schools. The few policies that are in place are not effective (Story et al., 2009).

### **Healthy, Hunger-Free Kids Act**

In recent years, there has been a shift in the nutrition children are provided during school. Since the implementation of the Healthy, Hunger-Free Kids Act of 2010, schools have made improvements in the school breakfast and lunch programs to incorporate more fresh, nutritious options. The Healthy, Hunger-Free Kids Act of 2010 also added new provisions and evaluation for local school wellness policies. All local educational agencies that participate in the National School Lunch and/or Breakfast Program are required to establish and implement a school wellness policy that is supportive to a school environment, promotes student health and reduces childhood obesity (U.S. Department of Agriculture [USDA], 2016). The government began to recognize the important role schools play in combating issues related to poor nutrition and physical inactivity. Goals were set to achieve certain nutrition standards, physical activity requirements, and to increase other activities promoting wellness like gardens, family engagement, community involvement, and health/social services (USDA, 2016). Many legislators and educators recognize the importance of providing students with nutritious meals to accompany learning. They acknowledge that without proper nourishment, it is very difficult for children to be academically successful. No one would ever take away a child's lunch because of a behavior issue, budget cuts, or pressure to achieve high test scores. However, administrators

and teachers restrict physical activity for all of these reasons. Schools face challenges to deliver equitable and effective physical activity, due to teacher layoffs and lack of financial resources (Institute of Medicine, 2013). Teachers often use restricting recess as a tactic for classroom management (Turner, Chriqui, & Chaloupka, 2013); administrators are forced to make decisions about how to allocate limited funds (Geller, Rubin, Nodvin, Teague, & Frumkin, 2007); and physical education along with organized sports are reduced when time and resources are scarce (Story et al., 2009).

### **NCLB & ESSA**

The No Child Left Behind Act (NCLB), administered by the Education Department from 2002 to 2015, omitted physical education as one of the core academic subjects. Since physical education was not a core subject, many schools neglected to ensure there was a highly qualified individual teaching it (Story et al., 2009). Standardized tests serve a purpose to evaluate the academic performance of schools, but they do not assist in measuring the success of schools at promoting and encouraging physical activity. In fact, the emphasis on standardized test may actually result in children spending more sedentary hours at a desk. The primary purpose of schools is to educate students in academic subjects, civic values, and social responsibilities that will equip them to reach their full potential (Geller et al., 2007). Schools should not feel pressure to inhibit quality physical education, because of policy pressures. In 2015, NCLB was replaced by the Every Student Succeeds Act (ESSA), which holds schools accountable for students' academic performances. However, for the first time in history, the definition of a well-rounded education also included health and physical education (U.S. Department of Education, 2015).

## **Healthy People 2020**

Healthy People 2020 is an initiative designed to improve the health of America. Its objectives target younger children through increasing physical activity in childcare settings, behavioral interventions to reduce screen time, and mandating recess/physical education in the schools (CDC, 2016). However, many schools face challenges with regard to creating policies that include the objectives of Healthy People 2020. The United Nations Standards of Human Rights (1977) endorses the right that federal prisoners be allowed at least an hour of outdoor exercise every day. When even federal prisoners, whose rights are restricted by design, have such rights to outdoor exercise, it is unclear why children should not be allowed access to outdoor recess during school. In fact, only 8 states have policies requiring daily recess in schools (CDC, 2018b). There are currently no federal laws or incentives requiring the American school systems to offer physical education (McKenzie & Lounsbery, 2009). State legislation is not addressing this issue either. Only 15% of elementary, 9% of middle, and 6% of high schools require students to take PE classes (NPAPA, 2018).

## **School Responsibility**

If change is going to occur, it is the responsibility of the people who create state and school policies. By mandating recess and physical education, policy makers have the capability to effectively increase school-based physical activity opportunities for youth. Districts that encompass strong school practice policies regarding the restriction of recess for behavior management or academic reasons are positively associated with children having more opportunities for physical activity (Turner et al., 2013). The epidemics of childhood obesity and metabolic diseases are not going to be resolved overnight. Creating a healthy school is a step-by-step process that requires sustained dedication (Geller et al., 2007). The whole school, whole

community, whole child model promotes the role schools, organized sports, community engagement, and family involvement play in the overall health of children (CDC, 2018b). It is going to take strong policies and collaboration among different entities to incorporate wellness programs and services for the youth. Evidence-based practice needs to progress to evidence-based policy.

**What ways can schools facilitate physical activity?**

Incorporating several of the following ideas into the schools can entirely change the amount of physical activity children receive (CDC, 2017).

**Table 1. Recommendations to Increase Physical Activity in Youth**

|   |   |
|---|---|
| <ul style="list-style-type: none"> <li>• Provide at least 150 minutes of weekly physical education</li> <li>• Offer intramural sports or running/walking clubs</li> <li>• Promote active transportation</li> <li>• Assign physically active homework</li> </ul> | <ul style="list-style-type: none"> <li>• Utilize resources, like GoNoodle, to build physical activity breaks into classroom lessons</li> <li>• Allocate at least 20 minutes of daily recess during the school day</li> <li>• Develop district policies that prohibit the restriction of recess as a tactic for behavior management</li> </ul> |
|---|---|

## **Chapter 5 - Implications for School Health**

### **Understanding Behavior Change**

#### **TEO**

In an effort to reduce the prevalence of metabolic diseases and improve the academic performance of children, physical activity needs to be better understood and emphasized in the school setting. Many interventions developed to increase physical activity in youth have been unsuccessful (Beets et al., 2016). The fundamental mechanisms that are involved in changing physical activity in young people have been misunderstood (Beets et al., 2016). A model proposed called the Theory of Expanded, Extended, and Enhanced Opportunities (TEO) goes beyond the usual frameworks (Beets et al., 2016). The focus of TEO is on expanding opportunities for youth to be active, extending current physical activity programs by lengthening the amount of time allocated, and enhancing the number of occasions that exist to participate in physical activity during the day by developing strategies to increase intensity and duration of physical activity. It elaborates on the opportunity component of the COM-B model, emphasizing the importance of before, after, and during school movement (Michie et al., 2014). TEO helps personnel identify and create opportunities for kids to be active during the day. Strategies like finding ways to minimize instruction time, reducing time spent taking turns, and ensuring there is adequate equipment and space, can all provide additional minutes of MVPA. This framework can be applied in and outside a school context. Youth development programs that are focused on educational activities can even practice TEO. There are many diverse educational experiences that allocate a portion of time to physical activity, so by teaching these facilitators how to increase MVPA by using TEO strategies, these activities can provide another opportunity for children to move.

## **SWITCH**

School Wellness Integration Targeting Child Health (SWITCH) is a framework that empowers school wellness leaders to deliver evidence-based interventions to promote wellness programs. It can be challenging to implement new models in real-world settings, so SWITCH supplies leaders with the training and support to be successful (Chen et al., 2018). The focus of policy should be to promote physical activity programs in schools that meet the needs and interests of all students. The SWITCH framework includes those with illness, injury, and developmental disability, in addition to those with obesity, sedentary lifestyles, or a disinterest in traditional team or competitive sports.

## **SAAFE**

Supportive, Active, Autonomous, Fair, and Enjoyable (SAAFE) principles provide an evidence-based framework to design, deliver, and evaluate activity in school (Lubans et al., 2017). Support is integral to learning and motivation. Thus, it is imperative teachers support children's psychological needs for autonomy, competence, and relatedness through their language, behaviors, and expectations during physical activity sessions (Lubans et al., 2017). A performance or control-driven environment is not going to produce an appropriate environment for all children to engage in physical activity. Children with obesity may feel uncomfortable or disadvantaged during certain activities. Equipment or uniforms may not fit certain body types. There should be adequate resources to purchase safe equipment and develop programs that foster physical activity in everyone. The active component of the SAAFE model emphasizes ways to optimize movement by reducing lines, avoiding elimination activities, and minimizing sedentary transition times (Lubans et al., 2017). Physical education teachers should maximize the time students spend obtaining MVPA by finding integrative ways to incorporate high-intensity

exercises throughout the entire duration of class time. Allowing autonomy and fairness are two other components of SAAFE. Students should have the ability to make choices and participate in activities that encourage self-comparison rather than peer-comparison (Lubans et al., 2017). The age and maturity of children should also be assessed. Tailoring specific physical education programs appropriately to meet the needs of different populations is going to be the key in a successful intervention. Exercise should be enjoyable, and it should never be used as punishment, or to socially isolate children (Lubans et al., 2017). It is essential that children develop the knowledge, skills, and confidence at a young age to be physically active for a lifetime.

### **Take Initiative**

The school environment serves as a crucial component to encourage and promote physical activity opportunities. Sometimes the only chance children have for a nutritious meal is at school. Well, the same can be true for physical activity. Sometimes the only opportunity children have to participate in physical activity is at school. Environments exert a strong influence on physical activity (IKEA, 2015). Many children live in unsafe neighborhoods; their parents work long hours and are not home to supervise them outdoors; some have no access to indoor recreation facilities. In a survey conducted for the Family Kids and Youth, Play Report, the main reason why parents restricted children's outdoor play was for safety concerns of child predators, traffic, and crime (IKEA, 2015). Schools must encourage physical activity now, so that children have the tools needed to incorporate activity into their adult lives. People living in poverty are at a higher risk of developing metabolic diseases (Levine, 2011). Unfortunately, many of these people are not insured and do not always receive adequate health care. If comprehensive approaches were taken by policy makers and educators to promote physical

activity, many risk factors for these prevalent diseases could be reduced. It is difficult to separate and measure the exact influence physical activity has in comparison to inactive lifestyles; however, it is clear that if physical activity becomes habitual in a child's early years of life it can provide the greatest impact on mortality and longevity (Hills et al., 2007). Legislation needs to be developed that incorporates mandated physical activity opportunities within the school day. Additional financial resources need to be allocated to safe equipment and facilities. Schools need to be provided with resources to educate families and children on the importance of living a healthy lifestyle. For children who are inactive, even small increases in physical activity can be beneficial to their overall health. Most of the frameworks on physical activity in schools agree that a whole-school approach is needed to obtain the greatest benefits for students. (Institute of Medicine, 2013). A whole-school approach requires schools, communities, legislatures, and parents all to be on board.

### **Conclusion**

Physical activity in schools is a vital component to comprehensive, well-rounded education. It has the ability to positively impact children's academics, life-long health, and overall well-being. The public health crises associated with inactive lifestyles cannot be ignored. The prevalence of inactivity in youth behaviors has contributed to an increase in unhealthy risk factors that predicate a call for change (WHO, 2002). School districts, legislators, and communities are all responsible for taking effective efforts to promote physical activity opportunities. Currently, the schools in the United States receive a D- grade on physical activity support, which means only 20-26% of schools are excelling by creating active school policies, offering quality physical education, and taking advantage of physical activity opportunities (NPAPA, 2018). There are many reasons to be physical activity. Replacing dysfunctional

physical activity policies and practices with evidence-based strategies to expand, extend, and enhance opportunities for physical activity will lead positive outcomes.

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